

IN THE  
UNITED STATES PATENT AND TRADEMARK OFFICE

Michael J. Chaloner et al.

Confirmation No.: 6430

Application No.: 09/912,211

Examiner: V. U. Brown

Filing Date: 07-24-2001

Group Art Unit: 2635

Title: SYSTEM AND METHOD FOR IMPROVED OBJECT IDENTIFICATION

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Commissioner For Patents  
PO Box 1450  
Alexandria, VA 22313-1450

TRANSMITTAL OF APPEAL BRIEF

Sir:

Transmitted herewith is the Appeal Brief in this application with respect to the Notice of Appeal filed on 02-10-2005.

The fee for filing this Appeal Brief is (37 CFR 1.17(c)) \$500.00.

(complete (a) or (b) as applicable)

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(a) apply.

( ) (a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d) for the total number of months checked below:

( ) one month	\$120.00
( ) two months	\$450.00
( ) three months	\$1020.00
( ) four months	\$1590.00

( ) The extension fee has already been filled in this application.

(X) (b) Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

Please charge to Deposit Account **08-2025** the sum of \$500.00. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees. A duplicate copy of this sheet is enclosed.

(X) I hereby certify that this correspondence is being deposited with the U.S. Postal Service as Express Mail, Airbill No. EV482745675US, in an envelope addressed to: MS Appeal Brief - Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date shown below.

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OR

( ) I hereby certify that this paper is being transmitted to the Patent and Trademark Office facsimile number \_\_\_\_\_ on \_\_\_\_\_

Number of pages:

Typed Name: Joy H. Perigo

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Respectfully submitted,

Michael J. Chaloner et al.

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04-11-05

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HEWLETT-PACKARD COMPANY  
Intellectual Property Administration  
P.O. Box 272400  
Fort Collins, Colorado 80527-2400

Docket No.: 10004955-1  
(PATENT)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of:  
Michael J. Chaloner et al.

Application No.: 09/912,211

Confirmation No.: 6430

Filed: July 24, 2001

Art Unit: 2635

For: SYSTEM AND METHOD FOR IMPROVED  
OBJECT IDENTIFICATION

Examiner: V. U. Brown

**APPEAL BRIEF**

MS Appeal Brief - Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

As required under § 41.37(a), this brief is filed within two months of the Notice of Appeal filed in this case on February 10, 2005, and is in furtherance of said Notice of Appeal.

The fees required under § 41.20(b)(2) are dealt with in the accompanying TRANSMITTAL OF APPEAL BRIEF.

This brief contains items under the following headings as required by 37 C.F.R. § 41.37 and M.P.E.P. § 1206:

- |       |   |
|-------|---|
| I.    | Real Party In Interest                        |
| II.   | Related Appeals and Interferences             |
| III.  | Status of Claims                              |
| IV.   | Status of Amendments                          |
| V.    | Summary of Claimed Subject Matter             |
| VI.   | Grounds of Rejection to be Reviewed on Appeal |
| VII.  | Argument                                      |
| VIII. | Claims  |

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X. Related Proceedings  
Appendix A Claims

I. REAL PARTY IN INTEREST

The real party in interest for this appeal is:

Hewlett-Packard Company

II. RELATED APPEALS, INTERFERENCES, AND JUDICIAL PROCEEDINGS

There are no other appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

III. STATUS OF CLAIMS

A. Total Number of Claims in Application

There are 24 claims pending in the application.

B. Current Status of Claims

1. Claims canceled: 1-22, 25, 38-41, 43
2. Claims withdrawn from consideration but not canceled: None
3. Claims pending: 23-24, 26-37, 42, 44-52
4. Claims allowed: None
5. Claims rejected: 23-24, 26-37, 42, 44-52

C. Claims On Appeal

1. The claims on appeal are claims 23-24, 26-37, 42, 44-52.

#### IV. STATUS OF AMENDMENTS

Appellant did not file an Amendment After Final Rejection. Appellant last amended the claims in a Response filed August 9, 2004 in response to the non-final Office Action mailed May 10, 2004. A Final Office Action (hereinafter, Final Action) in this matter was mailed on November 17, 2004.

#### V. SUMMARY OF CLAIMED SUBJECT MATTER

Discussions about elements and recitations of the following claims can be found at least at the cited exemplary locations in the specifications and drawings.

According to claim 23, a container comprising:

object presence detection equipment internal to said container, said equipment comprising at least one transmitter of transmitted signal energy and a plurality of fixed receivers of received signal energy (line 20 of page 8-line 3 of page 9; 201, 202-204 of Figure 2);

a set of objects for object presence detection internal to said container, such that an object of said set of objects is operable to modify said transmitted signal energy of a selected frequency to generate said received signal energy of said selected frequency (lines 3-9 of page 10), wherein said set of objects is disposed in a configuration selected from a linear array, a two-dimensional array, and a three-dimensional array (lines 1-14 of page 8); and

a container wall substantially surrounding said object presence detection equipment and said set of objects, said wall operable to shield said equipment and said set of objects from extraneous external signals (lines 15-19 of page 8; 200 of Figure 2).

According to claim 24, the container of claim 23 wherein said set of objects comprises a tape cartridge (lines 20-23 of page 8).

According to claim 26, the container of claim 23 wherein said set of objects comprises a plurality of arrays of objects (lines 9-11 of page 8).

According to claim 27, the container of claim 26 wherein each array of said plurality of arrays of objects has associated transmitters, receivers, analyzing circuitry, and data processing equipment (lines 3-9 of page 10).

According to claim 28, the container of claim 23 wherein said transmitted and said received signal energy are selected from electromagnetic radio-frequency energy, sonic energy, and ultrasonic energy (lines 1-15 of page 5).

According to claim 29, the container of claim 28 wherein said object is operable to modify said transmitted signal energy of a selected frequency by resonating at said frequency (lines 1-11 of page 5).

According to claim 30, the container of claim 29 wherein said resonating is enhanced by variable resonant material characteristics selected from length, width, thickness, material composition, electrical resistance, electrical excitation, application of tensile force, application of compressive force, temperature, electrical induction, and electrical capacitance (lines 15-22 of page 5).

According to claim 31, the container of claim 29 wherein objects in a subset of said objects within said set of objects are interchangeable and resonate at the same frequency (lines 3-10 of page 7).

According to claim 32, the container of claim 23 wherein said at least one transmitter and said at least one receiver are combined into at least one transceiver (lines 26-27 of page 8).

According to claim 33, a method for identifying a subset of objects within a set of objects in a container, said method comprising:

transmitting a signal of a selected frequency within said container (lines 20-21 of page 8);

modifying said transmitted signal at said selected frequency by at least one object of said set of objects, wherein said at least one object is a member of said subset (lines 1-11 of page 5), and wherein said subset comprises a plurality of said objects responsive to said selected frequency (lines 3-9 of page 10);

receiving said modified signal within said container (lines 20-22 of page 8);

analyzing and processing said received signal (lines 6-9 of page 11); and

shielding the interior of said container from extraneous external signals (lines 15-19 of page 8; 200 of Figure 2).

According to claim 34, the method of claim 33 wherein said set of objects comprises a tape cartridge (lines 20-23 of page 8).

According to claim 35, the method of claim 33 wherein said set of objects is disposed in a configuration selected from a linear array, a two-dimensional array, a three-dimensional array, and a plurality of said arrays (lines 9-11 of page 8).

According to claim 36, the method of claim 33 wherein said transmitted and said received signals are selected from electromagnetic radio-frequency signals, sonic signals, and ultrasonic signals (lines 1-15 of page 5).

According to claim 37, the method of claim 36 wherein said modifying is performed by resonating at said selected frequency (lines 1-11 of page 5).

According to claim 42, a tape storage container comprising:  
object presence detection equipment internal to said container, said equipment comprising at least one transmitter of transmitted signal energy and at least one receiver of received signal energy (line 20 of p. 8-line 3 of page 9; 201, 202-204 of Figure 2);  
a plurality of tape cartridges for object presence detection internal to said container, wherein said plurality of tape cartridges is disposed in a configuration selected from a linear array, a two-dimensional array, and a three-dimensional array (lines 1-14 of page 8), such that a tape cartridge of said plurality of tape cartridges is operable to modify said transmitted signal energy of a selected frequency to generate said received signal energy of said selected frequency (lines 3-9 of page 10); and  
a metallic outer body substantially surrounding said object presence detection equipment and said plurality of tape cartridges, said metallic outer body operable to shield said equipment and said tape cartridges from extraneous external signals (lines 15-19 of page 8; 200 of Figure 2).

According to claim 44, the container of claim 42 wherein said plurality of tape cartridges comprises a plurality of arrays of objects (lines 20-23 of page 8).

According to claim 45, the container of claim 44 wherein each array of said plurality of arrays of tape cartridges has associated transmitters, receivers, analyzing circuitry, and data processing equipment (lines 3-9 of page 10).

According to claim 46, the container of claim 42 wherein said transmitted and said received signal energy are selected from electromagnetic radio-frequency energy, sonic energy, and ultrasonic energy (lines 1-15 of page 5).

According to claim 47, the container of claim 46 wherein said object is operable to modify said transmitted signal energy of a selected frequency by resonating at said frequency (lines 1-11 of page 5).

According to claim 48, the container of claim 47 wherein said resonating is enhanced by variable resonant material characteristics selected from length, width, thickness, material composition, electrical resistance, electrical excitation, application of tensile force, application of compressive force, temperature, electrical induction, and electrical capacitance (lines 15-22 of page 5).

According to claim 49, the container of claim 47 wherein tape cartridges in a subset of said tape cartridges within said plurality of tape cartridges are interchangeable with one another and resonate at the same frequency (lines 3-10 of page 7).

According to claim 50, the container of claim 42 wherein said at least one transmitter and said at least one receiver are combined into at least one transceiver (lines 26-27 of page 8).

According to claim 51, the method of claim 33 wherein said analysis determines the number of members of said subset present within said container (lines 20-26 of page 7).

According to claim 52, the method of claim 33 wherein said set of set objects comprises a plurality of subsets, wherein each said subset is responsive to a different said selected frequency (lines 3-10 of page 7).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A. First Ground of Rejection

Claims 23-29, 32-37, 42, 44-47, and 50-51 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Bowers et al.* (U.S. Patent 5,963,134, hereinafter *Bowers*) in view of *Francis et al.* (U.S. Patent 6,600,418, hereinafter *Francis*).

B. Second Ground of Rejection

Claims 30 and 48 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Bowers* in view of *Francis* further in view of *Lastinger* (U.S. Patent No. 6,104,311).

C. Third Ground of Rejection

Claims 31 and 49 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Bowers* in view of *Francis* further in view of *Greene et al.* (U.S. Patent No. 5,581,257, hereinafter *Greene*).

D. Fourth Ground of Rejection

Claim 52 is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Bowers* in view of *Francis* further in view of *Chieu et al.* (U.S. Patent No. 5,995,019, hereinafter *Chieu*).

VII. ARGUMENT

A. First Ground of Rejection

Claims 23-29, 32-37, 42, 44-47, and 50-51 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Bowers* in view of *Francis*. To establish a prima facie case of obviousness, *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991), teaches that three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a

reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Without conceding that the second and third criteria have been met, Appellant respectfully submits that the Examiner's proposed combinations do not teach or suggest all of the limitations of the rejected claims.

Claim 23 stands rejected as obvious in light of *Bowers* in view of *Francis*. Claim 23 recites a "container comprising . . . object presence detection equipment internal to said container . . . [and] wherein said set of objects is disposed in a configuration selected from a linear array, a two-dimensional array, and a three-dimensional array." Appellant respectfully asserts that *Bowers* in view of *Francis* fails to teach such a container. FIGURE 9 of *Bowers* does not teach this container, as contended by the Examiner in the Final Action rejection of claim 25. Rather, as described at column 15 lines 43–58, FIGURE 9 of *Bowers* illustrates a shelf of articles scanned by a portable scanner that is external to the depicted shelf. In addition, claim 23 recites "at least one transmitter of transmitted signal energy and a plurality of fixed receivers." *Bowers* does not teach such an arrangement. These deficiencies of *Bowers* are not cured by combining *Bowers* with *Francis*, because *Francis* does not teach or suggest a container as recited by claim 1. Because neither *Bowers* nor *Francis* teach or suggest a "container comprising . . . object presence detection equipment internal to said container . . . [and] wherein said set of objects is disposed in a configuration selected from a linear array, a two-dimensional array, and a three-dimensional array" and does not teach or suggest "at least one transmitter of transmitted signal energy and a plurality of fixed receivers," *Bowers* in view of *Francis* does not establish a prima facie case of obviousness for claim 23. Therefore, Appellant respectfully asks that the rejection of claim 23 be withdrawn.

Claims 24 and 26–32 depend either directly or indirectly from claim 23 and thus inherit all of that claim's limitations. While each of claims 24 and 26–32 recite limitations which make them patentable in their own right, Appellant respectfully submits that each is at least patentable for depending from claim 23. Therefore, Appellant respectfully asks that the rejections of claims 24 and 26–32 be withdrawn.

Claim 33 is also rejected as obvious in light of *Bowers* in view of *Francis*. Claim 33 recites identifying a subset of objects within a container by “transmitting a selected frequency signal within said container . . . modifying said transmitted signal at said selected frequency by at least one object of said set of objects, wherein said at least one object is a member of said subset, and wherein said subset comprises a plurality of said objects responsive to said selective frequency.” Appellant respectfully asserts that *Bowers* does not teach or suggest identifying subsets in this manner. Further, *Francis* does not cure the deficiency of *Bowers* by teaching or suggesting identifying subsets as recited by claim 33.

Furthermore, the Examiner admits in the Final Action that *Bowers* does not teach or suggest “shielding the interior of said container from extraneous external signals” as recited by claim 33. *Francis* is cited in the Final Action as teaching “the use of electromagnetic shielding to prevent reading of the [sic] by extraneous source” at col. 9, lines 49-65. The “RF shield” of *Francis* is “positioned between the [RFID] tags” so that motion and direction can be determined for a load. See col. 9, lines 49-65. However, *Francis* does not appear to teach or suggest the recited limitation of claim 33 of “shielding the interior of said container from extraneous external signals.” Accordingly, because neither *Bowers* nor *Francis* teaches or suggests all limitations recited by claim 33, the cited combination does not support a prima facie case of obviousness for claim 33. Appellant respectfully asks that the rejection of claim 33 be withdrawn.

Claims 34, 36, and 37 depend either directly or indirectly from claim 33. Although each of claims 34, 36, and 37 recite limitations that make these claims patentable in their own right, each is at least patentable for depending from patentable claim 33. Therefore, Appellant respectfully requests that the rejections of claims 34, 36, and 37 be withdrawn.

Claim 42 is rejected as obvious in light of *Bowers* in view of *Francis*. Claim 42 recites “a tape storage container comprising . . . object presence detection equipment internal to said container . . . [and] a plurality of tape cartridges . . . wherein said plurality of tape cartridges is disposed in a configuration selected from a linear array, a two-dimensional array, and a three-dimensional array.” The Examiner contends in the Current Action that FIGURE 9 of *Bowers* teaches these limitations. Appellant respectfully does not agree with

the Examiner's contention. *Bowers* places transmitters outside of a container housing articles. Accordingly, *Bowers* does not teach or suggest at least the above-recited limitation of claim 42 of "object presence detection equipment internal to said container." Nor does *Francis* teach or suggest at least this limitation as recited by claim 42, and thus does not cure the deficiency of *Bowers* with respect to claim 42.

Furthermore, claim 42 also recites a "metallic outer body operable to shield said equipment and said tape cartridges from extraneous external signals." The Examiner admits in the Final Action that *Bowers* is "silent on teaching metallic outer body operable to shield said equipment and said tape cartridges from extraneous external signals." The Examiner claims that *Francis* "teaches the use of electromagnetic shielding to prevent reading of the [sic] by extraneous source." The "RF shield" of *Francis* is "positioned between the [RFID] tags" so that motion and direction can be determined for a load. See col. 9, lines 49-65. *Francis* teaches that "the entire assembly may be enclosed in a RF transparent enclosure." See col. 9, lines 64-65. *Francis* does not appear to teach or suggest the recited limitation of claim 42 of a "metallic outer body operable to shield said equipment and said tape cartridges from extraneous external signals. Accordingly, because neither *Bowers* nor *Francis* teaches or suggests all limitations recited by claim 42, the cited combination does not support a prima facie case of obviousness for claim 42. Appellant respectfully requests that the rejection of claim 42 be withdrawn.

Claims 44-51 depend either directly or indirectly from claims 33 and 42. Although each of claims 44-51 recite limitations that make them patentable in their own right, each is at least patentable for depending from patentable claims 33 and 42. Therefore, Appellant respectfully requests that the rejections of claims 44-51 be withdrawn.

#### B. Second Ground of Rejection

Claims 30 and 48 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Bowers* in view of *Francis* further in view of *Lastinger*. To establish a prima facie case of obviousness, *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991), teaches that three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in

the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Without conceding that the second and third criteria have been met, Appellant respectfully submits that the Examiner's proposed combinations do not teach or suggest all of the limitations of the rejected claims.

As shown above in "First Ground of Rejection," *Bowers* in view of *Francis* does not teach or suggest all limitations of claims 24 and 42. Claims 30 and 48 depend indirectly from claims 24 and 42 respectively and, accordingly, comprise all limitations of the base claims from which they depend. *Lastinger* is not relied upon as curing the deficiencies of *Bowers* and *Francis* with respect to claims 24 and 42. Therefore, *Bowers* in view of *Francis*, further in view of *Lastinger* does not teach or suggest all limitations of claims 30 and 48. Claims 30 and 48 are not properly rejected as obvious over the cited references. Appellant respectfully requests that the rejections of claims 30 and 48 be withdrawn.

### C. Third Ground of Rejection

Claims 31 and 49 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Bowers* in view of *Francis* further in view of *Greene*. To establish a prima facie case of obviousness, *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991), teaches that three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Without conceding that the second and third criteria have been met, Appellant respectfully submits that the Examiner's proposed combinations do not teach or suggest all of the limitations of the rejected claims.

As shown above in "First Ground of Rejection," *Bowers* in view of *Francis* does not teach or suggest all limitations of claims 24 and 42. Claims 31 and 49 depend indirectly from claims 24 and 42 respectively and, accordingly, comprise all limitations of the base claims from which they depend. *Greene* is not relied upon as curing the deficiencies of *Bowers* and *Francis* with respect to claims 24 and 42. Therefore, *Bowers* in view of *Francis*, further in

view of *Greene* does not teach or suggest all limitations of claims 31 and 49. Claims 31 and 49 are not properly rejected as obvious over the cited references. Appellant respectfully requests that the rejections of claims 31 and 49 be withdrawn.

D. Fourth Ground of Rejection

Claim 52 is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Bowers* in view of *Francis* further in view of *Chieu*. To establish a prima facie case of obviousness, *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991), teaches that three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Without conceding that the second and third criteria have been met, Appellant respectfully submits that the Examiner's proposed combinations do not teach or suggest all of the limitations of the rejected claims.

As shown above in "First Ground of Rejection," *Bowers* in view of *Francis* does not teach or suggest all limitations of claim 33. Claim 52 depends directly from claim 33 and, accordingly, comprises all limitations of base claim 33 from which it depends. *Chieu* is not relied upon as curing the deficiencies of *Bowers* and *Francis* with respect to claim 33. Therefore, *Bowers* in view of *Francis*, further in view of *Chieu* does not teach or suggest all limitations of claim 52. Claim 52 is not properly rejected as obvious over the cited references. Appellant respectfully requests that the rejection of claim 52 be withdrawn.

VIII. CLAIMS

A copy of the claims involved in the present appeal is attached hereto as Appendix A. The claims in Appendix A include amendments made in the Response mailed August 9, 2004. No further amendments have been made in response to the Final Action mailed November 17, 2004.

IX. EVIDENCE

No evidence pursuant to §§ 1.130, 1.131, or 1.132 or entered by or relied upon by the examiner is being submitted.

X. RELATED PROCEEDINGS

No related proceedings are referenced in II. above, or copies of decisions in related proceedings are not provided, hence no Appendix is included.

Dated: April 8, 2005

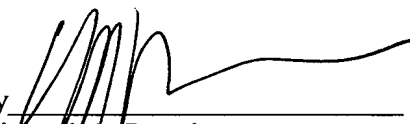
Respectfully submitted,

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as Express Mail, Airbill No. EV482745675US, in an envelope addressed to: MS Appeal Brief - Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.

Dated: April 8, 2005

Signature: 

Joy H. Perigo

By   
Michael A. Papalas  
Registration No.: 40,381  
Attorney for Appellant

(214) 855-8186

**APPENDIX A**

**Claims Involved in the Appeal of Application Serial No. 09/912,211**

1-22. (Canceled)

23. (Previously Presented) A container comprising:

object presence detection equipment internal to said container, said equipment comprising at least one transmitter of transmitted signal energy and a plurality of fixed receivers of received signal energy;

a set of objects for object presence detection internal to said container, such that an object of said set of objects is operable to modify said transmitted signal energy of a selected frequency to generate said received signal energy of said selected frequency, wherein said set of objects is disposed in a configuration selected from a linear array, a two-dimensional array, and a three-dimensional array; and

a container wall substantially surrounding said object presence detection equipment and said set of objects, said wall operable to shield said equipment and said set of objects from extraneous external signals.

24. (Previously Presented) The container of claim 23 wherein said set of objects comprises a tape cartridge.

25. (Canceled)

26. (Previously Presented) The container of claim 23 wherein said set of objects comprises a plurality of arrays of objects.

27. (Previously Presented) The container of claim 26 wherein each array of said plurality of arrays of objects has associated transmitters, receivers, analyzing circuitry, and data processing equipment.

28. (Previously Presented) The container of claim 23 wherein said transmitted and said received signal energy are selected from electromagnetic radio-frequency energy, sonic energy, and ultrasonic energy.

29. (Previously Presented) The container of claim 28 wherein said object is operable to modify said transmitted signal energy of a selected frequency by resonating at said frequency.

30. (Previously Presented) The container of claim 29 wherein said resonating is enhanced by variable resonant material characteristics selected from length, width, thickness, material composition, electrical resistance, electrical excitation, application of tensile force, application of compressive force, temperature, electrical induction, and electrical capacitance.

31. (Previously Presented) The container of claim 29 wherein objects in a subset of said objects within said set of objects are interchangeable and resonate at the same frequency.

32. (Previously Presented) The container of claim 23 wherein said at least one transmitter and said at least one receiver are combined into at least one transceiver.

33. (Previously Presented) A method for identifying a subset of objects within a set of objects in a container, said method comprising:

transmitting a signal of a selected frequency within said container;

modifying said transmitted signal at said selected frequency by at least one object of said set of objects, wherein said at least one object is a member of said subset, and wherein said subset comprises a plurality of said objects responsive to said selected frequency;

receiving said modified signal within said container;

analyzing and processing said received signal; and

shielding the interior of said container from extraneous external signals.

34. (Previously Presented) The method of claim 33 wherein said set of objects comprises a tape cartridge.

35. (Previously Presented ) The method of claim 33 wherein said set of objects is disposed in a configuration selected from a linear array, a two-dimensional array, a three-dimensional array, and a plurality of said arrays.

36. (Previously Presented) The method of claim 33 wherein said transmitted and said received signals are selected from electromagnetic radio-frequency signals, sonic signals, and ultrasonic signals.

37. (Previously Presented) The method of claim 36 wherein said modifying is performed by resonating at said selected frequency.

38–41. (Canceled)

42. (Previously Presented) A tape storage container comprising:  
object presence detection equipment internal to said container, said equipment comprising at least one transmitter of transmitted signal energy and at least one receiver of received signal energy;

a plurality of tape cartridges for object presence detection internal to said container, wherein said plurality of tape cartridges is disposed in a configuration selected from a linear array, a two-dimensional array, and a three-dimensional array, such that a tape cartridge of said plurality of tape cartridges is operable to modify said transmitted signal energy of a selected frequency to generate said received signal energy of said selected frequency; and

a metallic outer body substantially surrounding said object presence detection equipment and said plurality of tape cartridges, said metallic outer body operable to shield said equipment and said tape cartridges from extraneous external signals.

43. (Canceled)

44. (Previously Presented) The container of claim 42 wherein said plurality of tape cartridges comprises a plurality of arrays of objects.

45. (Previously Presented) The container of claim 44 wherein each array of said plurality of arrays of tape cartridges has associated transmitters, receivers, analyzing circuitry, and data processing equipment.

46. (Previously Presented) The container of claim 42 wherein said transmitted and said received signal energy are selected from electromagnetic radio-frequency energy, sonic energy, and ultrasonic energy.

47. (Previously Presented) The container of claim 46 wherein said object is operable to modify said transmitted signal energy of a selected frequency by resonating at said frequency.

48. (Previously Presented) The container of claim 47 wherein said resonating is enhanced by variable resonant material characteristics selected from length, width, thickness, material composition, electrical resistance, electrical excitation, application of tensile force, application of compressive force, temperature, electrical induction, and electrical capacitance.

49. (Previously Presented) The container of claim 47 wherein tape cartridges in a subset of said tape cartridges within said plurality of tape cartridges are interchangeable with one another and resonate at the same frequency.

50. (Previously Presented) The container of claim 42 wherein said at least one transmitter and said at least one receiver are combined into at least one transceiver.

51. (Previously Presented) The method of claim 33 wherein said analysis determines the number of members of said subset present within said container.

52. (Previously Presented) The method of claim 33 wherein said set of set objects comprises a plurality of subsets, wherein each said subset is responsive to a different said selected frequency.